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1966



DISTRIBUTION

of the

VARIETIES OF BARLEY

grown in the

PRAIRIE PROVINCES

(1945 - 1965)

.....

CIRCULAR NO. 30

.....

LINE ELEVATORS FARM SERVICE

Winnipeg, Manitoba

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November, 1966





DISTRIBUTION OF THE VARIETIES OF BARLEY  
GROWN IN THE PRAIRIE PROVINCES  
(1945 to 1965)

Surveys to determine the extent to which different varieties of barley are grown in Manitoba, Saskatchewan and Alberta have been conducted annually by the Line Elevators Farm Service since 1945. A report covering annual surveys made during the 12-year period, 1945 to 1956, has been published.\* The results of barley variety surveys made at 5-year intervals since 1945 are presented in this circular.

METHODS

Each year, early in June, each Agent (country grain buyer) of the Line Elevator Companies associated with the Line Elevators Farm Service was provided with a Variety Survey Form. He was asked to complete the form by estimating and recording the percentage of the total seeded acreage of barley in the district served by his shipping point that individual varieties occupied. The number of Agents in Manitoba, Saskatchewan and Alberta completing and submitting usable variety survey forms varied from 2,223 in 1946 to 1,067 in 1965.

To determine the percentage of the total acreage any given barley variety occupied in individual provinces, and in the Prairie Provinces as a unit, the average of the percentage estimates for each shipping point was weighted in accordance with the total barley area grown in the district served by the shipping point. The seeded acreages of barley, by shipping points, as recorded by the Canadian Wheat Board were used for this purpose.

RESULTS

The survey data summarized in the accompanying tables are self-explanatory. A few highlights of the surveys, by provinces and for the Prairie Provinces as a unit, are given below.

MANITOBA (Table 1)

It is clear from Table 1 that there is a continual change in the varieties of barley grown in Manitoba. The introduction of the malting barley variety Montcalm in 1945, and of Parkland in 1956, was responsible for the decline and eventual disappearance in Manitoba of several older varieties, including Titan, Rex, Prospect, Sanalta, Wisconsin 38 and Mensury Ottawa 60. By 1950, Montcalm had become the

\* F. J. Greaney and J. Barnes. The Distribution of Barley Varieties in the Prairie Provinces (1945 to 1956). Line Elevators Farm Service Circular No. 21, December, 1958, Winnipeg, Manitoba.

most popular variety in Manitoba, accounting for 47.3% of the total provincial barley acreage. In 1955 it occupied 55.7% of the total. Its popularity declined after 1955, owing largely to the introduction of Parkland. In 1960, four years after it was introduced, Parkland accounted for 52.1% of the total barley acreage. It was by far the most popular variety in 1965, occupying 48.1% of the total. The importance Manitoba barley growers attach to growing malting barley varieties is shown by the 1960 survey. In that year, two malting varieties - Parkland and Montcalm - accounted for no less than 87.5% of the provincial barley acreage.

The varieties O.A.C. 21, Plush, and Gartons, which were the three leading varieties in 1945, occupied a very small percentage of the 1965 barley acreage of Manitoba. O.A.C. 21 and Gartons maintained a fairly important place in Manitoba until the introduction of Parkland in 1956. The present surveys suggest that, in the years ahead, these and other old barley varieties will be completely replaced by new improved varieties such as Keystone, and the recently introduced variety Conquest. These new, high yielding varieties may well retain their popularity for a long time. They are resistant to loose smut, a disease of barley that does not lend itself to easy, practical control by seed treatment.

The results in Table 1 show that although a relatively large number of varieties are grown each year in Manitoba a small number of varieties account for a very large percentage of the provincial barley acreage. In 1965, for instance, four varieties - Parkland (48.1%), Keystone (17.0%), Herta (17.0%) and Montcalm (11.0%), occupied 93.1% of the total area seeded to barley in Manitoba.

#### SASKATCHEWAN (Table 2)

Although a relatively large number of barley varieties are grown each year in Saskatchewan, a large proportion of the provincial barley acreage is occupied by three or four varieties. In 1945, for instance, four varieties - O.A.C. 21 (26.8%), Prospect (15.3%), Plush (14.7%), and Hamchen (13.7%) - accounted for 70.5% of the provincial acreage. Three varieties - Parkland, Hamchen and Montcalm - were seeded on 66.5% of the total area devoted to barley in Saskatchewan in 1965.

The introduction of improved varieties like Montcalm (1945) and Parkland (1956) resulted in the almost complete disappearance in Saskatchewan of several old varieties including O.A.C. 21, Plush, Prospect, Rex, Regal, and Trebi. As a matter of fact, the following varieties, Newal, Gartons, Sanalta and Mensury Ottawa 60 were never grown on any extensive scale in Saskatchewan. The results in Table 2 show that the barley varieties grown in Saskatchewan are continually changing. For instance, no less than 53.7% of the 1965 Saskatchewan barley acreage was seeded to varieties that were unknown in 1945.



### ALBERTA (Table 3)

In 1955, 1960 and 1965 Olli was the most prominent barley variety in Alberta. In 1955, its best year, it accounted for 36.7% of the total provincial barley acreage. It still occupied 21.4% of the total in 1965. As the results in Table 3 show, the area devoted to the varieties O.A.C. 21, Newal and Trebi steadily declined in Alberta after 1945. These varieties were replaced by Montcalm and later by Parkland and Gateway. Montcalm was quite popular in Alberta in 1950. In that year it accounted for 18.2% of the provincial barley acreage. By 1965, however, it occupied only 4.8% of the acreage. It can be expected that early maturing varieties like Gateway, particularly the improved strain of Gateway - Gateway 63 - will increase in popularity in Alberta in the years ahead. This and other new early maturing varieties are likely to be grown extensively in the northern regions of the province where earliness is an important factor in the successful production of barley.

Of the fourteen varieties that were reported to be grown in Alberta in 1945, only five of them - O.A.C. 21, Newal, Hannchen, Montcalm and Olli - were grown on any appreciable acreage in 1965. Although the shift in barley varieties has been less drastic in Alberta than in Manitoba and Saskatchewan the need still exists in Alberta for the development of early maturing, disease resistant, high yielding varieties which will be suitable for the malting and milling industries. This is evident when it is considered that Olli, a variety that fills these requirements quite adequately, was first grown in Alberta in 1936. It is rather remarkable then, that as late as 1965, Olli was still the leading barley variety in the province, accounting for 21.4% of the total barley acreage.

### PRAIRIE PROVINCES (Table 4)

Some thirty different varieties of barley were grown in the Prairie Provinces during the period 1945 to 1965. However, the largest number of varieties that were grown on any appreciable scale in any survey year of this period was sixteen in 1960. The introduction of the variety Montcalm in 1945 brought about a marked change in the barley variety picture of the Prairie Provinces. It had the effect of reducing the acreage devoted to several prominent old varieties, including O.A.C. 21, Plush, Gartons, Trebi, Prospect, and Sanalta. In 1950, five years after it was introduced, Montcalm accounted for 27.6% of the total acreage of barley in the Prairie Provinces. Owing to the increased area devoted to Olli and the introduction of Parkland, the popularity of Montcalm declined after 1950. It occupied only 9% of the prairie barley acreage in 1965. In 1955 the variety Olli ranked next to Montcalm in importance and it was the second most important variety in the Prairie Provinces in 1960 and 1965.

As the results in Table 4 show, certain new barley varieties are readily accepted by western farmers - Montcalm and Parkland are typical examples. However, there are other varieties, Vantmore, Plush and Husky, for instance, that are not so readily accepted. The general trend is, of course, for new varieties of outstanding merit to gradually replace the older varieties. No less than 61% of the total area devoted to barley in the Prairie Provinces in 1965 was seeded to varieties that were unknown in 1945. The data in Table 4 suggest that the variety distribution pattern established in the Prairie Provinces during the period 1945 to 1965 is likely to be followed in the years ahead. From the present surveys it can be expected then that a relatively small number of superior varieties, probably three or four, will continue to account for a very large proportion of the area seeded to barley in Manitoba, Saskatchewan and Alberta.

The results of the surveys herein reported indicate that barley growers in the Prairie Provinces are "variety conscious". The rapidity with which they accept new introductions is indicative of their desire to improve their barley growing efficiency by using the best available varieties. There is little doubt that, through the use of new breeding methods and improved techniques, Canadian barley breeders will continue to make progress toward the development and release of superior barley varieties for the Prairie Provinces. Farmers in Western Canada can therefore rest assured that in the years ahead many new improved barley varieties will be developed and made available to them.

#### ACKNOWLEDGEMENTS

The Line Elevators Farm Service is indebted to all Agents, past and present, of the Line Elevator Companies associated with the Farm Service Department who, during the 20-year period 1945 to 1965, provided the basic information of the barley variety surveys reported in this circular. Special credit is due to J. Barnes, Chief Seed Technician, Line Elevators Farm Service, for his assistance in tabulating the survey results.

F. J. Greaney, Director

November, 1966

Table 1. Distribution of barley varieties. Estimated percentage of the total barley acreage of Manitoba occupied by individual varieties of barley at 5-year intervals since 1945. Varieties arranged in order of importance for 1965.

Variety	Percentage of Acreage <sup>1/</sup>				
	1945	1950	1955	1960	1965
Parkland	-	-	-	52.1	48.1
Keystone	-	-	-	-	17.0
Herta	-	-	-	1.9	17.0
Montcalm	(*)	47.3	55.7	35.4	11.0
Gartons	16.8	11.1	17.1	2.5	2.2
O.A.C. 21	29.6	21.2	9.9	5.8	1.6
Betzes	-	-	-	(*)	0.8
Vantage	-	1.4	7.0	0.3	0.3
Husky	-	-	3.4	0.2	0.3
Vantmore	-	-	(*)	0.3	0.1
Olli	(*)	0.1	0.8	(*)	0.1
Trebi	1.5	0.9	0.2	0.1	(*)
Plush	28.2	7.6	0.7	0.1	(*)
Hannchen	0.3	0.1	(*)	(*)	(*)
Titan	(*)	0.5	0.1	(*)	(*)
Sanalta	7.6	4.8	2.9	(*)	(*)
Prospect	0.2	0.5	(*)	-	-
Rex	0.5	(*)	-	-	-
Wisconsin 38	9.7	(*)	-	-	-
Mensury Ott. 60	4.8	(*)	-	-	-
Others <sup>2/</sup>	0.8	4.5	2.2	1.3	1.5
Total	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> The asterisk (\*) indicates a variety reported as grown, but the estimate of acreage was less than 0.1% of the total barley acreage of Manitoba.

<sup>2/</sup> Includes the following varieties: Jubilee, Newal, Compana, Wolfe, Gateway, Regal, Swan and Traill.



Table 2. Distribution of barley varieties. Estimated percentage of the total barley acreage of Saskatchewan occupied by individual varieties of barley at 5-year intervals since 1945. Varieties arranged in order of importance for 1965.

Variety	Percentage of Acreage <sup>1/</sup>				
	1945	1950	1955	1960	1965
Parkland	-	-	-	27.7	26.4
Hannchen	13.7	13.5	16.5	17.8	20.4
Montcalm	(*)	28.7	31.7	31.9	19.7
Betzes	-	-	-	(*)	6.7
Compana	-	2.4	8.7	6.2	6.2
Palliser	-	-	-	(*)	4.0
Olli	0.4	1.2	8.0	5.3	3.7
Husky	-	-	3.2	2.9	3.2
Jubilee	-	-	-	(*)	2.2
Vantage	-	0.3	12.5	2.3	1.7
Keystone	-	-	-	-	1.3
Herta	-	-	-	0.3	1.0
Gateway	-	-	(*)	0.9	1.0
O.A.C. 21	26.8	13.4	4.7	1.7	0.7
Newal	0.8	1.4	0.3	(*)	0.2
Plush	14.7	15.1	4.1	0.9	(*)
Gartons	0.5	0.1	0.8	0.7	(*)
Trebi	7.7	2.7	1.2	0.2	(*)
Titan	(*)	7.0	3.3	0.2	(*)
Prospect	15.3	6.2	1.4	(*)	-
Sanalta	0.5	0.7	0.7	(*)	-
Rex	6.3	2.5	(*)	-	-
Regal	8.7	(*)	-	-	-
Wisconsin 38	2.0	(*)	-	-	-
Mensury Ott. 60	0.4	(*)	-	-	-
Others <sup>2/</sup>	2.2	4.8	2.9	1.0	1.6
Total	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> The asterisk (\*) indicates a variety reported as grown, but the estimate of acreage was less than 0.1% of the total barley acreage of Saskatchewan.

<sup>2/</sup> Includes the following varieties: Wolfe, Vantmore, Velvon, Swan, Warrior, Traill and Gateway 63.



Table 3. Distribution of barley varieties. Estimated percentage of the total barley acreage of Alberta occupied by individual varieties of barley at 5-year intervals since 1945. Varieties arranged in order of importance for 1965.

Variety	Percentage of Acreage <sup>1/</sup>				
	1945	1950	1955	1960	1965
Olli	15.0	27.5	36.7	32.5	21.4
Parkland	-	-	-	11.4	14.9
Gateway	-	-	(*)	9.0	14.5
Betzes	-	-	-	(*)	7.7
Palliser	-	-	-	(*)	5.4
O.A.C. 21	32.5	16.7	7.9	9.8	4.9
Compana	-	4.8	9.8	11.4	4.9
Montcalm	(*)	18.2	10.7	6.9	4.8
Husky	-	-	0.1	1.2	4.2
Hannchen	0.4	0.3	1.1	2.8	3.3
Gateway 63	-	-	-	-	3.3
Jubilee	-	-	-	(*)	3.0
Newal	28.8	19.9	19.2	5.7	2.4
Herta	-	-	-	1.1	2.0
Vantage	-	(*)	10.0	3.8	1.1
Wolfe	-	-	(*)	3.0	0.8
Keystone	-	-	-	-	0.5
Trebi	12.0	4.3	1.2	0.2	(*)
Titan	(*)	1.7	0.5	0.1	-
Plush	2.1	0.8	0.2	(*)	-
Sanalta	4.6	2.2	0.6	(*)	-
Harlan	-	(*)	0.2	(*)	-
Prospect	0.1	0.2	(*)	-	-
Rex	0.4	0.8	(*)	-	-
Regal	1.1	(*)	-	-	-
Wisconsin 38	0.3	(*)	-	-	-
Mensury Ott. 60	0.3	(*)	-	-	-
Others <sup>2/</sup>	2.4	2.6	1.8	1.1	0.9
Total	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> The asterisk (\*) indicates a variety reported as grown, but the estimate of acreage was less than 0.1% of the total barley acreage of Alberta.

<sup>2/</sup> Includes the following varieties: Gartons, Vantmore, Traill and Swan.

Table 4. Distribution of barley varieties. Estimated percentage of the total barley acreage of the Prairie Provinces occupied by individual varieties of barley at 5-year intervals since 1945. Varieties arranged in order of importance for 1965.

Variety	Percentage of Acreage <sup>1/</sup>				
	1945	1950	1955	1960	1965
Parkland	-	-	-	20.4	19.6
Olli	4.4	13.2	19.6	20.1	15.7
Gateway	-	-	(*)	5.4	10.2
Montcalm	(*)	27.6	25.6	18.2	9.0
Hannchen	6.2	4.6	7.7	8.2	7.6
Betzes	-	-	-	(*)	7.1
Compana	-	3.0	8.1	8.6	5.0
Palliser	-	-	-	(*)	4.8
O.A.C. 21	29.2	16.5	6.7	6.5	3.7
Husky	-	-	1.9	1.8	3.7
Jubilee	-	-	-	(*)	2.7
Herta	-	-	-	0.8	2.5
Gateway 63	-	-	-	-	2.3
Newal	8.6	9.8	8.5	3.2	1.7
Keystone	-	-	-	-	1.5
Vantage	-	0.4	10.7	3.0	1.2
Wolfe	-	-	(*)	1.6	0.5
Gartons	4.9	2.3	2.5	0.4	0.1
Trebi	7.2	3.1	1.1	0.2	(*)
Plush	14.9	6.9	2.0	0.4	(*)
Titan	(*)	3.2	1.6	0.1	-
Prospect	6.8	2.3	0.6	(*)	-
Sanalta	3.6	2.2	1.0	(*)	-
Rex	3.0	1.2	(*)	-	-
Regal	4.1	(*)	-	-	-
Wisconsin 38	3.7	(*)	-	-	-
Mensury Ott. 60	1.6	(*)	-	-	-
Others <sup>2/</sup>	1.8	3.7	2.4	1.1	1.1
Total	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> The asterisk (\*) indicates a variety reported as grown, but the estimate of acreage was less than 0.1% of the total barley acreage of the Prairie Provinces.

<sup>2/</sup> Includes the following varieties: Vantmore, Harlan, Traill and Swan.









